

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-8, and 13-15 are pending, with Claims 1 and 13 amended, and Claim 12 canceled by the present amendment.

In the Official Action, Claim 12 was objected to under 37 C.F.R. § 1.75 as being a substantial duplicate of Claim 1; Claim 13 was objected to; Claims 1-8 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1-8, and 12-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Eriksson et al. (U.S. Patent Publication No. 2002/0059453, hereinafter "Eriksson") in view of Fogel (WO 2001/50151) and Comstock et al. (U.S. Patent Publication No. 2002/0183038, hereinafter "Comstock").

Claims 1 and 13 are amended to more clearly describe a distinctly claimed Applicants' invention. Support for this amendment is found in Applicants' originally filed specification.<sup>1</sup> No new matter is added.

In view of the cancellation of Claim 12, the double patenting rejection is moot. In view of the amendments to Claims 1 and 13, the rejection under 35 U.S.C. § 112, second paragraph and the objection to Claim 13 is moot.

Briefly recapitulating, amended Claim 1 is directed to

An apparatus used in a first mobile communication system with a plurality of wireless base stations, the first mobile communication system operated by a first provider, the apparatus comprising:  
    an acquiring unit configured to acquire identification information of the plurality of wireless base stations;  
    a location detecting unit configured to detect a present location of the apparatus on acquiring identification information of the plurality of wireless base stations;  
    a storing unit configured to store first service location information with respect to the first provider in which the identification information

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<sup>1</sup> Specification, Fig. 5.

acquired by the acquiring unit is associated with the present location of the apparatus detected by the location detecting unit; and

a location information providing unit configured to calculate locally a location of the plurality of wireless base stations using the detected present location of the apparatus stored in the storing unit, and to exchange the locally calculated first service location information ***and second service location with respect to a second provider through an ad hoc network with a second apparatus in a second mobile communication system that is operated by the second provider***, wherein

the location information providing unit is configured to provide a user with information based on the first service location information and the second service location information.

Claim 13 is directed to

A method used by an apparatus in a first mobile communication system with a plurality of wireless base stations, the first mobile communication system operated by a first provider, comprising:

acquiring identification information of the plurality of wireless base stations;

detecting a present location of the apparatus on acquiring identification information of the plurality of wireless base stations;

storing first service location information with respect to the first provider in which the acquired identification information is associated with the detected present location;

locally calculating a location of the plurality of wireless base stations using the detected present location to generate first service location information; and

exchanging the locally calculated first service location information ***and second service location information with respect to a second provider through an ad hoc network with a second apparatus in a second communication system that is operated by the second provider***, wherein

the step of providing the calculated location includes providing a user with information based on the locally calculated first service location information and the second service location information.

Fogel describes a method for localizing a moving object using a satellite base positioning system and a short range wireless system (e.g., Bluetooth). Localization of a moving object is accomplished using GPS when sufficient satellites are visible. If insufficient satellites are visible, the locations of one or more nearby Bluetooth base stations are used to supplement or replace the GPS computation results to enable more accurate cellular phone localization. In Fogel, device 54 is allocated a unique identification number and device 54's location is recorded in a look-up table. When queried, device 54 transmits an

identification number (instead of or in addition to device 54's location) to cellular phone 61 via return signal 64.<sup>2</sup>

However, as acknowledged by the Official Action,<sup>3</sup> Fogel fails to disclose or suggest *sharing* of the service location information through a network *with another apparatus that is served by the wireless base station*. To cure this deficiency, the Official Action cites Eriksson.

Eriksson describes a method and system in a heterogeneous environment, capable of locating at least one optimal access area or point for supporting one or more access technologies requested by the user. The optimal access points, and alternative options are mapped in accordance with the resulting location, combined requirements and service/application requirements of the communication device. This mapping and other information/recommendations related to the access points are then provided to the communications device for action by the user.<sup>4</sup> In Eriksson, the result of a mapping analysis can be used to identify or select the optimal access points (step 250). The selection of access points is a function of the mapped information. The mapped information may be a subset of the overall available access points, however the selection can be an access point outside the subset.<sup>5</sup>

The Official Action asserts that Eriksson discloses a location information providing unit configured to share the service location information through a network [PAN] with another apparatus that is served by the wireless base station.<sup>6</sup> Applicants traverse this finding and note that Fig. 2 and paragraph [0031] of the Eriksson discloses that position information, information about the network service availability, and combined requirements of the

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<sup>2</sup> Fogel page 15, lines 6-14.

<sup>3</sup> Official Action, page 4, lines 9-11.

<sup>4</sup> Eriksson, Abstract.

<sup>5</sup> Eriksson paragraph 28.

<sup>6</sup> Official Action, page 4, lines 9-11.

communication device are obtained to prepare mapped information. The mapped information may be used in the network (paragraph [0028]) and then provided to the user to identify an optimal access point (paragraph [0029]). However, the mapped information is never *shared with another communication device that is served by the network*.

Furthermore, both Fogel and Eriksson fail to disclose that the service location information is *calculated in the apparatus itself* and then shared with another device. Paragraph [0025] of Eriksson mentions that the positional information may be provided to the communication device by using GPS or the like, but not that the location information is calculated within the device itself.

Nonetheless, to advance progress toward an allowance, Claims 1 and 13 are amended to more clearly describe and distinctly claim Applicants' invention. Paragraph [0038] of Eriksson describes that a user may have several devices with his PAN available to access different transport technologies both inside and outside the PAN. These devices can then be used to obtain and transfer information by position, available access points, and recommendations.<sup>7</sup> Eriksson further discloses that a laptop PC 405 can obtain information about access points or other information from a network through a mobile radio telephone. In this case, the information is shared between the laptop PC 405 and the mobile radio telephone 410.<sup>8</sup> However, Eriksson does not disclose or suggest a location information providing unit configured to calculate locally a location of the plurality of wireless base stations using the detected present location of the apparatus stored in the storing unit, and to exchange the locally calculated first service location information *and second service location with respect to a second provider through an ad hoc network with a second apparatus in a second mobile communication system that is operated by the second provider*, wherein the location

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<sup>7</sup> Eriksson paragraph [0038].

<sup>8</sup> Eriksson paragraph [0039] and Figure 4.

information providing unit is configured to provide a user with information based on the first service location information and the second service location information, as recited in amended Claim 1. Eriksson also does not disclose or suggest exchanging the locally calculated first service location information and second service location information with respect to a second provider through an ad hoc network with a second apparatus in a second communication system that is operated by the second provider, wherein the step of providing the calculated location includes providing a user with information based on the locally calculated first service location information and the second service location information, as recited in amended Claim 13.

As none of the cited prior art, individually or in combination, disclose or suggest all the elements of independent Claims 1 and 13, Applicants submit the inventions defined by Claims 1 and 13, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.<sup>9</sup>

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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<sup>9</sup> MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest all the claim limitations.